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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,376	11/03/2003	Yasuomi Ooki	8028-1044	1130

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EXAMINER

DEAN, RAYMOND S

ART UNIT	PAPER NUMBER
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2618

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/698,376

Applicant(s)

OOKI ET AL.

Examiner

Raymond S. Dean

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3 and 6-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3 and 6-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 3, 6 have been considered but are moot in view of the new ground(s) of rejection.

Deshpande et al. (US 2003/0003933), hereafter Deshpande(2), teaches a multi-service provider environment comprising roaming agreements in which the end user can select from a plurality of service providers based on any number of selection criteria such as speed (See Sections 0008, 0015, 0016).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banaei (US 2004/0203751) in view of Deshpande et al. (US 2003/0003933), hereafter Deshpande(2).

Regarding Claim 3, Banaei teaches a method of wireless LAN (Local Area Network) communication, comprising the steps of: communicating data between a wireless LAN equipment for each of plural service providers to be connected to an

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Internet and a user terminal used for users (Sections: 0037 lines 8 – 12, 0041 – 0042, 0043 lines 1 – 6, 0044), wherein each said wireless LAN equipment is managed by a respective one of the plural service providers and is shared by the service providers (Section 0044, the wireless LAN equipment of the visited service provider is managed by the visited service provider and the wireless LAN equipment of the home service provider is managed by the home service provider, the visited service provider shares its wireless LAN equipment by allowing a user contracted with the home service provider to use the wireless LAN equipment of said visited service provider); exchanging user's information among the service providers, when said user terminal selects said wireless LAN equipment (Section 0044, user authentication and authorization comprises exchange of user information) and the selected wireless LAN equipment is managed by the service provider not to be contracted the user of said user terminal (Sections: 0037 lines 8 – 12, 0041 – 0042); collecting data of a communication amount and communication time of said user terminal of the each of users, when said user terminal communicates with said wireless LAN equipment using wireless LAN communication (Sections 0044 – 0045); and calculating data of a charge on usage of said wireless LAN equipment in accordance with said collected data and said exchanged user information, whereby the service provider to be contracted with the user of said user terminal pays said charge to the service provider for managing said wireless LAN equipment (Section 0044).

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Banaei does not teach enabling said user terminal to select the wireless LAN equipment with higher communication speed than another of the wireless LAN equipment.

Deshpande(2) teaches enabling said user terminal to select the wireless LAN equipment with higher communication speed than another of the wireless LAN equipment (Sections 0008, 0015, 0016).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the multi-service provider system of Banaei with the selection configuration of Deshpande(2) for the purpose of enabling an end user to select a service provider in a location service by multiple service providers as taught by Deshpande(2).

4. Claims 6, 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Banaei (US 2004/0203751) in view of Deshpande et al. (US 2002/0176579), hereafter Deshpande(1) and further in view of Deshpande et al. (US 2003/0003933) (Deshpande(2))

Regarding Claim 6, Banaei teaches a system for wireless LAN (Local Area Network) communication, comprising: a wireless LAN equipment for each of plural service providers to be connected to an Internet (Sections: 0037 lines 8 – 12, 0041 – 0042, 0043 lines 1 – 6, 0044), each said wireless LAN equipment being managed by a respective one of the service providers and being shared by the service providers (Section 0044, the wireless LAN equipment of the visited service provider is managed

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by the visited service provider and the wireless LAN equipment of the home service provider is managed by the home service provider, the visited service provider shares its wireless LAN equipment by allowing a user contracted with the home service provider to use the wireless LAN equipment of said visited service provider); a user terminal for said each of users to be communicated with said wireless LAN equipment using wireless LAN communication (Sections: 0037 lines 8 – 12, 0041 – 0042, 0043 lines 1 – 6, 0044); exchanging user's information among the service providers (Section 0044), wherein said user terminal comprises selecting means for selecting said wireless LAN equipment with high communication speed (Section 0001 lines 5 – 8, 802.11 provides high speed data), and said wireless LAN equipment comprises a service management server for managing user's information of the each of users, and for transmitting said user information, when said selecting means selects said wireless LAN equipment managed by the service provider not to be contracted with the user of said user terminal (Sections 0044, 0037 lines 8 – 12, 0041 – 0042, user authentication and authorization comprises exchange of user information), means for collecting data of a communication amount and communication time of said user terminal of the each of users, when said user terminal communicates with said wireless LAN equipment (Sections 0044 – 0045), and means for calculating data of a charge on usage of said wireless LAN equipment in accordance with said collected data, whereby the service provider to be contracted with the user of said user terminal pays said charge to the service provider for managing said wireless LAN equipment (Section 0044).

Banaei does not teach an information exchange server.

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Deshpande(1), which is in the same field of endeavor, teaches an information exchange server (Section 0040 lines 5 – 10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the WLAN system of Banaei with the information exchange server of Deshpande(1) for the purpose of determining the appropriate information to be sent the end-user as taught by Deshpande(1).

Banaei in view of Deshpande(1) does not teach selecting means for selecting said wireless LAN equipment with higher communication speed than another of the wireless LAN equipment.

Deshpande(2) teaches selecting means for selecting said wireless LAN equipment with higher communication speed than another of the wireless LAN equipment (Sections 0008, 0015, 0016).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the multi-service provider system of Banaei in view of Deshpande(1) with the selection configuration of Deshpande(2) for the purpose of enabling an end user to select a service provider in a location service by multiple service providers as taught by Deshpande(2).

Regarding Claim 10, Banaei in view of Deshpande(1) and in further view of Deshpande(2) teaches all of the claimed limitations recited in Claim 6. Banaei further teaches wherein said wireless LAN equipment is a wireless LAN base station (Figure 2, access points comprise base stations).

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5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Banaei (US 2004/0203751) in view of Deshpande et al. (US 2002/0176579)(Deshpande(1)) in view of Deshpande et al. (US 2003/0003933) (Deshpande(2)), as applied to Claim 6 above, and further in view of Chen et al. (US 2003/0050062).

Regarding Claim 7, Banaei in view of Deshpande(1) and in further view of Deshpande(2) teaches all of the claimed limitations recited in Claim 6. Banaei in view of Deshpande(1) and in further view of Deshpande(2) does not teach wherein said user information is an ID and a password.

Chen teaches a WLAN in which an ID and password are used for authentication (Section 0043).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to modify WLAN system of Banaei in view of Deshpande(1) and in further view of Deshpande(2) with the ID and password of Chen for the purpose of authentication as taught by Chen.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Banaei (US 2004/0203751) in view of Deshpande et al. (US 2002/0176579)(Deshpande(1)) in view of Deshpande et al. (US 2003/0003933) (Deshpande(2)), as applied to Claim 6 above, and further in view of Billhartz (US 7,082,117).

Regarding Claim 8, Banaei in view of Deshpande(1) and in further view of Deshpande(2) teaches all of the claimed limitations recited in Claim 6. Banaei in view of Deshpande(1) and in further view of Deshpande(2) does not teach wherein said

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user terminal informs a connected service provider of an MAC address via said service management server of the contracted service provider of said user terminal, and said wireless LAN equipment of the connected service provider authenticates whether or not to permit connection based on the MAC address.

Billhartz teaches a user terminal informing a connected service provider of an MAC address and said wireless LAN equipment of the connected service provider authenticates whether or not to permit connection based on the MAC address (Column 6 lines 33 – 36).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the WLAN system of Banaei in view of Deshpande(1) and in further view of Deshpande(2) with the authentication procedure of Billhartz for the purpose of intrusion detection as taught by Billhartz.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Banaei (US 2004/0203751) in view of Deshpande et al. (US 2002/0176579)(Deshpande(1) in view of Deshpande et al. (US 2003/0003933) (Deshpande(2)) in view of Chen et al. (US 2003/0050062), as applied to Claim 7 above, and further in view of Jones et al. (WO 02/11466).

Regarding Claim 9, Banaei in view of Deshpande(1) in view of Deshpande(2) and in further view of Chen teaches all of the claimed limitations recited in Claim 7. Banaei in view of Deshpande(1) in view of Deshpande(2) and in further view of Chen does not teach wherein said information exchange server issues a one-time password and one-time ID valid for a given time, when said user terminal connects to said

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wireless LAN equipment of the non-contracted service provider, and converts the user's information based on the one-time password and one-time ID.

Jones teaches issuing a one-time password and one-time ID valid for a given time and converting the user's information based on the one-time password and one-time ID (See NOVELTY).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the WLAN system of Banaei in view of Deshpande(1) in view of Deshpande(2) and in further view of Chen with the password and ID method taught by Jones for the purpose of enabling a user to self-register to gain access to internet services as taught by Jones.

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Banaei (US 2004/0203751) in view of Deshpande et al. (US 2002/0176579)(Deshpande(1) in view of Deshpande et al. (US 2003/0003933) (Deshpande(2))), as applied to Claim 6 above, and further in view of Labun et al. (US 6,842,621).

Regarding Claim 11, Banaei in view of Deshpande(1) and in further view of Deshpande(2) teaches all of the claimed limitations recited in Claim 6. Banaei in view of Deshpande(1) and in further view of Deshpande(2) does not teach means for setting a time band for using said wireless LAN equipment for the each of service providers; and means for refusing connection of said user terminal when a time of usage thereof is out of the set time band for using said wireless LAN equipment.

Labun teaches means for setting a time band for using said wireless LAN equipment and means for refusing connection of said user terminal when a time of usage thereof is out of the set time band for using said wireless LAN equipment (Column 9 lines 25 – 32).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Banaei in view of Deshpande(1) and in further view of Deshpande(2) with the time band method of Labun for the purpose of preventing a ping-pong handover that could occur if a mobile moves into an edge of a proximity of coverage area of the access point as taught by Labun.

9. Claims 12 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banaei (US 2004/0203751) in view of Deshpande et al. (US 2002/0176579) (Deshpande(1) in view of Deshpande et al. (US 2003/0003933) (Deshpande(2))), as applied to Claim 6 above, and further in view of Kostic et al. (US 2003/0134642).

Regarding Claim 12, Banaei in view of Deshpande(1) and in further view of Deshpande(2) teaches all of the claimed limitations recited in Claim 6. Banaei in view of Deshpande(1) and in further view of Deshpande(2) does not teach means for ranking the each of service providers in accordance with charge plans on usage of said wireless LAN equipment; and means for restricting connection in order from the service providers with a lower rank, in case that an average communication speed per user falls below a predetermined communication speed or in case that a number of

connections to said wireless LAN equipment exceeds a preset number of connections of simultaneously connectable users.

Kostic teaches means for ranking service providers in accordance with charge plans on usage of said wireless LAN equipment (Sections: 0005, 0020, typical hotspots comprise user's contracted with different service providers, priority weighting is used thus, for example, a user with high traffic intensity can be ranked lower than a user with low traffic intensity, said users can be associated with different service providers thus when said users are ranked said service providers are therefore ranked); and means for restricting connection in order from the service providers with a lower rank, in case that an average communication speed per user falls below a predetermined communication speed or in case that a number of connections to said wireless LAN equipment exceeds a preset number of connections of simultaneously connectable users (Section 0020).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the WLAN system of Banaei in view of Deshpande(1) and in further view of Deshpande(2) with the load balancing method of Kostic for the purpose of reducing network congestion as taught by Kostic.

Regarding Claim 13, Banaei in view of Deshpande(1) and in further view of Deshpande(2) does not teach means for ranking the each of users in accordance with charge plans on usage of said wireless LAN equipment; and means for restricting connection in order from the users with a lower rank, in case that an average communication speed per user falls below a predetermined communication speed or in

case that a number of connections to said wireless LAN equipment exceeds a preset number of connections of simultaneously connectable users.

Kostic teaches means for ranking users in accordance with charge plans on usage of said wireless LAN equipment (Sections: 0005, 0020, typical hotspots comprise user's contracted with different service providers, priority weighting is used thus, for example, a user with high traffic intensity can be ranked lower than a user with low traffic intensity, said users can be associated with different service providers thus when said users are ranked said service providers are therefore ranked); and means for restricting connection in order from the users with a lower rank, in case that an average communication speed per user falls below a predetermined communication speed or in case that a number of connections to said wireless LAN equipment exceeds a preset number of connections of simultaneously connectable users (Section 0020).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the WLAN system of Banaei in view of Deshpande(1) and in further view of Deshpande(2) with the load balancing method of Kostic for the purpose of reducing network congestion as taught by Kostic.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

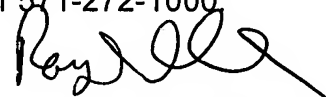
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S. Dean whose telephone number is 571-272-7877. The examiner can normally be reached on Monday-Friday 6:00-2:30.

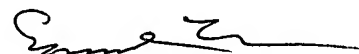
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Raymond S. Dean
March 9, 2007



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SUPERVISORY PATENT EXAMINER
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